

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A negative electrode, comprising:
a substrate; and
a coating on the said substrate, the coating including a binder and a ~~comprising:~~
a carbonaceous material that includes ~~comprising a mixture of massive~~ ball-shaped graphite particles, carbon fibers, and graphite flakes, wherein the ball shaped graphite particles include smaller graphite particles arranged such that the ball shaped graphite particles are isotropic; and
~~a binder.~~
2. (Currently amended) The negative electrode of claim 1, wherein the said carbonaceous material includes ~~comprises~~ a mixture of 10-90% ~~massive~~ ball-shaped graphite particles, 7.5-80% carbon fibers, and 2.5-30% graphite flakes by weight.
3. (Currently amended) The negative electrode of claim 1, wherein the said carbonaceous material includes ~~comprises~~ a mixture of 10-80% ~~massive~~ ball-shaped graphite particles, 15-80% carbon fibers, and 2.5-30% graphite flakes by weight.
4. (Currently amended) The negative electrode of claim 1, wherein the said carbonaceous material includes ~~comprises~~ a mixture of approximately 80% ~~massive~~ ball-shaped graphite particles, 15% carbon fibers, and 5% graphite flakes by weight.
5. (Currently amended) The negative electrode of claim 1, wherein the said ~~massive~~ ball-shaped graphite particles, carbon fibers, and graphite flakes have an average particle size of 10-35 μm .
6. (Currently amended) The negative electrode of claim 1, wherein the said binder is water-based.

7. (Currently amended) The negative electrode of claim 1, wherein the said binder does not contain fluorine.

8. (Currently amended) The negative electrode of claim 1, wherein the said binder includes ~~comprises~~ carboxymethyl cellulose.

9. (Currently amended) The negative electrode of claim 8, wherein the said binder includes ~~additionally comprises~~ styrene butadiene rubber.

10. (Currently amended) The negative electrode of claim 9, wherein the said styrene butadiene includes ~~comprises~~ 0-5% of the total weight of binder plus carbonaceous material.

11. (Currently amended) The negative electrode of claim 9, wherein the said substrate includes ~~comprises~~ titanium.

12. (Currently amended) The negative electrode of claim 8, wherein the said carboxymethyl cellulose includes ~~comprises~~ 0-10% of the total weight of binder plus carbonaceous material.

13. (Currently amended) The negative electrode of claim 1, wherein the said substrate includes ~~comprises~~ titanium.

14. (Currently amended) A battery, comprising:

a case;

a negative electrode ~~an electrode assembly~~ housed in the case, the negative electrode having and comprising: a negative electrode comprising: a negative coating on a negative substrate, the negative coating having a first binder and a carbonaceous material that includes; and a negative coating on said negative substrate comprising: a carbonaceous material comprising a mixture of massive ball-shaped graphite particles, carbon fibers, and graphite flakes, wherein the ball shaped graphite particles include

smaller graphite particles arranged such that the ball shaped graphite particles are isotropic; and

~~a first binder;~~

~~a positive electrode comprising:~~

~~a positive substrate; and a positive coating on said positive substrate; a lithium metal oxide; and~~

~~a second binder;~~

~~a separator between said negative and positive electrodes;~~

~~an electrolyte.~~

15. (Currently amended) The battery of claim 14, wherein the ~~said~~ carbonaceous material includes ~~comprises a mixture of~~ 10-90% ~~massive~~ ball-shaped graphite particles, 7.5-80% carbon fibers, and 2.5-30% graphite flakes by weight.

16. (Currently amended) The battery of claim 14, wherein the ~~said~~ carbonaceous material includes ~~comprises a mixture of~~ 10-80% ~~massive~~ ball-shaped graphite particles, 15-80% carbon fibers, and 2.5-30% graphite flakes by weight.

17. (Currently amended) The battery of claim 14, wherein the ~~said~~ carbonaceous material includes ~~comprises a mixture of~~ approximately 80% ~~massive~~ ball-shaped graphite particles, 15% carbon fibers, and 5% graphite flakes by weight.

18. (Currently amended) The battery as in claim 14, wherein the ~~said~~ case is hermetically sealed.

19. (Currently amended) The battery as in claim 14, wherein the ~~said~~ first binder is water-based.

20. (Currently amended) The battery as in claim 14, wherein the ~~said~~ first binder contains no fluorine.

21. (Currently amended) The battery as in claim 14, wherein the said first binder includes ~~comprises~~ carboxymethyl cellulose.

22. (Currently amended) The battery as in claim 21, wherein the said first binder further includes ~~comprises~~ styrene butadiene rubber.

23. (Currently amended) The battery as in claim 22, wherein the said negative substrate includes ~~comprises~~ titanium.

24. (Currently amended) The battery as in claim 14, wherein the said negative coating has a porosity of 20-45%.

25. (Currently amended) The battery as in claim 14, further comprising:
a positive electrode housed in the case, the positive electrode having a positive coating on a positive substrate, wherein the said positive coating has a porosity of 20-40%.

26. (Currently amended) The battery as in claim 14, wherein the said negative electrode forms C_6Li_n , and at a maximum state of charge, $0.5 \leq n \leq 0.9$.

27. (Currently amended) The battery as in claim 14, further comprising:
a positive electrode housed in the case, wherein the said positive electrode is constructed so as to form $Li_{1-p}MO_2$ during operation of the battery forms $Li_{1-p}MO_2$, wherein M includes ~~comprises~~ one or more transition metals, and at a maximum state of charge, $0.6 \leq p \leq 0.8$.

28. (Currently amended) The battery as in claim 14, wherein the said negative substrate includes ~~comprises~~ titanium.

29. (Currently amended) The battery as in claim 28, further comprising:

an electrolyte in the case and activating the negative electrode and a positive electrode, wherein the said electrolyte includes ~~comprises~~ a lithium salt in a cyclic and linear solvent.

30. (Currently amended) A method for making a negative electrode includes ~~comprises~~ the steps of:

providing a substrate;

combining ~~massive~~ components that include ball-shaped graphite particles, carbon fibers, graphite flakes, and a binder in a solvent, wherein the ball shaped graphite particles include smaller graphite particles arranged such that the ball shaped graphite particles are isotropic;

mixing the components to form a slurry;

coating at least a portion of the said substrate with the said slurry; and

evaporating the said solvent.

31. (Currently amended) The method of claim 30, wherein the said substrate includes ~~comprises~~ titanium.

32. (Currently amended) The method of claim 30, wherein the said solvent is water.

33. (Currently amended) The method of claim 30, wherein the said binder contains no fluorine.

34. (Currently amended) The method of claim 30, wherein the said binder includes ~~comprises~~ carboxymethyl cellulose.

35. (Currently amended) The method of claim 34, wherein the said binder further includes ~~comprises~~ styrene butadiene.

36. (Currently amended) The method of claim 35, wherein the said substrate includes ~~comprises~~ titanium.

37. (New) The electrode of claim 1, wherein the ball shaped particles include MAG D.

38. (New) The battery of claim 14, wherein the ball shaped particles include MAG D.

39. (New) The electrode of claim 1, wherein the smaller graphite particles are unorganized in the ball shaped graphite particles.

40. (New) The battery of claim 14, wherein the smaller graphite particles are unorganized in the ball shaped graphite particles.